

**REPORT TO**  
**ENVIRONMENTAL QUALITY COUNCIL ON**  
**PESTICIDE AND GROUNDWATER ENFORCEMENT**  
**PROGRAMS**  
**PURSUANT TO TITLE 75, CHAPTER 1, PART 3,**  
**SECTION 314**



**MONTANA DEPARTMENT OF AGRICULTURE**  
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# Montana Department of Agriculture

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## PESTICIDE PROGRAM

### COVID-19 Statement

The department enacted safety precautions in response to the COVID-19 pandemic that limited the number of in-person recertification trainings and routine inspections. However, all complaint investigations and ground water monitoring efforts were addressed and services continued uninterrupted throughout 2020 and 2021. Online trainings and webinars allowed the department to adapt and provide virtual training and recertification opportunities to Montana's pesticide dealers and applicators. In 2020, computer-based testing was offered in addition to in-person exams to increase flexibility and convenience for applicators.

The Montana Department of Agriculture (MDA) enforces the Montana Pesticide Act (MPA), Title 80, Chapter 8, Montana Code Annotated (MCA), and portions of the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Enforcement of the federal law is accomplished through the MDA/EPA Cooperative Enforcement Agreement (CEA). This agreement provides primary enforcement authority to Montana to enforce pesticide use and sale regulations.

#### ***1a. Ongoing Activities and Efforts to Promote Compliance Assistance and Education:***

Pesticide program staff promote compliance within the pesticide use community by providing information and education, technical assistance, conducting inspections, complaint investigations, environmental sampling and issuing enforcement actions consistent with Montana code.

#### **Information/Education:**

As required under 80-8-109, MCA, MDA develops and conducts educational programs for pesticide use/sales categories. Education promotes compliance and ensures that dealers and applicators are properly qualified. The educational program informs individuals working with pesticides about correct methods for formulating, applying, storing, disposing, handling, and transporting pesticides. These trainings also include information on proper record keeping for both the sale and use of pesticides.

Along with MSU Extension Service, MDA conducts educational programs for pesticide dealers, commercial/governmental applicators, and private applicators. MDA provides "initial" training and testing for both commercial applicators and private farm applicators. Subject to available funds, MDA and MSU Extension Service establish educational training programs for the public and retailers on pest management, pesticide use safety and alternative pest control methods.

Training manuals are used to provide information and education on pesticide sales, handling, use, application, and disposal. An exam score of 80 percent or higher is required for commercial and governmental applicators to achieve certification. This qualifies the licensed individual to use general-use and restricted-use pesticides. Once certified, all license holders must obtain 12 re-certification training credits over a 4-year period to remain licensed, or retest.

Educational programs encourage participants to comply with pesticide laws and serve as an avenue to present law revisions and new regulations. The information provided in training programs also informs participants of the potential environmental effects and consequences of illegally using or storing pesticides. Proposed changes to the Montana Pesticide Act are reviewed and discussed with the regulated community to clarify each specific element of the law changes. Discussion topics range from properly maintaining equipment, to Worker Protection, to general label safety language.

### **Technical Assistance:**

MDA works closely with pesticide registrants to steward pesticide products. Almost every registrant has a stewardship plan for the products they sell. Stewardship plans provide education to unlicensed applicators, commercial and government applicators, commercial composters, hobby livestock owners, organic growers, and others. It is in the registrant's best interest to promote, train and monitor the use of their products. As mentioned above, education programs allow MDA to not only educate the public in the proper use of pesticides, but it also allows the department a venue to share concerns that may adversely affect the environment.

### ***1b. Size and Description of the Regulated Community:***

Producing Establishments are pesticide retail businesses, including manufacturers and formulators, that package or repackage pesticides. All Producing Establishments are required to register with the EPA. In Montana, there are approximately 136 businesses currently registered as Producing Establishments (PE) with EPA. On average, the MDA conducts between 10 to 15 inspections per year that specifically target PE facilities.

Pesticide dealers require licenses to sell Agriculture-Use pesticides. The number of licensed pesticide dealers has remained fairly stable during 2020 and 2021, ranging from 444 to 405 respectively. Dealers selling pesticides for home, lawn and garden use only are referred to as "retailers" by definition, and are not required to be licensed; however, they are included in the regulated community. On average, MDA staff conduct approximately 80 to 100 routine dealer/marketplace and retail establishment inspections each year.

Commercial Applicators, persons who apply pesticides "for hire", and Governmental Applicators, persons who apply pesticides for a public entity (city, state or federal) or work for a public entity and train other applicators, are also required to obtain licenses in Montana. Operators apply pesticides under the supervision of a certified applicator which is required by law to train and oversee their operators' activities.

Non-commercial applicators are individuals who apply restricted-use pesticides and cannot be classified as a commercial, public utility, government applicator or private applicator. A certified non-commercial applicator may use restricted and general use pesticides on lands owned, rented, or leased by his employer or himself/herself. The total number of licensed non-commercial applicators in Montana dropped slightly over this reporting period.

Private farm applicators must obtain a special use-permit if they wish to use and apply "restricted-use" pesticides. Private farm applicator licenses are valid for five years and require six credit hours of recertification training over the 5-year period. Montana maintains a yearly average of approximately ~ 5,400 permitted farm (Private) applicators.

Table 1

<b>Licenses</b>					
<b>Year</b>	<b>Non-commercial, Public Utility</b>	<b>Dealer</b>	<b>Government</b>	<b>Commercial</b>	<b>Private</b>
2020	142	444	730	1157	5525
2021	119	405	685	949	5305

The total number of individual license holders has varied for several reasons, an evolving ag economy, normal turnover without replacements, and limitations on in-person dealer, commercial/ government, and farm applicators recertification trainings due to COVID-19.

In addition, license totals listed in Table 1 do not include homeowners or renters that apply pesticides to their own property (home, yard, lawn, or garden) but are still considered part of the regulated community.

### ***1c. Non-Compliance and Method of Discovery***

#### **Routine Commercial, Governmental and Marketplace/Dealer Inspections:**

Table 2 represents the number of routine inspections conducted in fiscal years 2020 and 2021. The inspections are classified according to the licensee type (marketplace, agricultural applicator, non-agricultural applicator, etc.) or by purpose of the inspection. For example, follow-up inspections are “for-cause” inspections, usually conducted because of a citizen tip or complaint. Generally, the number of inspections aligns with department goals and generates a uniform enforcement presence in the regulated community. For the two years demonstrated below, the distribution of inspections among various parts of the regulated community has remained relatively constant.

Table 2

<b>2020-2021 Routine Inspections</b>		
<b>Inspection type</b>	<b>2020</b>	<b>2021</b>
Ag-Use	91	50
Ag-Follow Up (for cause)	10	20
Non-Ag Use	172	52
Non-Ag Follow Up (for cause)	5	20
Experimental Use	1	1
PE	8	10
Marketplace	93	44
Imports	0	0
Exports	1	1
Cert. App. Records	202	83
RUP Dealer Records	46	30
<b>Total</b>	<b>629</b>	<b>312</b>

#### **Sampling and Inspections:**

The Legislature established authority to sample (Section 80-8-302, MCA), inspect (Section 80-8-304, MCA) and analyze pesticides or devices distributed within the State of Montana to determine whether such pesticides or devices meet the minimum standards listed on the label. The Analytical Laboratory Bureau, located on the Montana State University campus, performs

pesticide chemical analyses for MDA, other state and federal agencies, MSU Extension Service and the public.

The inspection and investigation authority granted under Section 80-8-304, MCA, allows department staff or an authorized agent, upon reasonable cause, with a warrant or consent of the inhabitant or owner, to inspect or investigate pesticide use. Compliance Assistance (CA) inspections of licensed dealers and applicators are routinely conducted. Although discretionary, a licensed applicator is eligible for CA through their first inspection or at a point when new regulation becomes mandatory. Routine inspections with commercial/government applicators are usually conducted on a 4–5-year rotation after the initial inspection. Program routine inspection goals (pre-Covid 19) average between 650-800 inspection events per year. Routine inspections are conducted with commercial applicators, government applicators, dealers, and permitted farm applicators.

In addition to the routine inspection program, inspections are conducted with individuals upon the receipt of a complaint (follow-up) or if there is reason to believe that someone is in non-compliance with the pesticide laws. The number of complaint investigations varies from year to year because pesticide use varies greatly with weather conditions, pest outbreaks, rainfall, crop types and commodity prices. The number of complaints, reports of damage and referrals from other agencies also vary from year to year for the same reason. Routine marketplace inspections are conducted at retailers/dealers to verify that products offered for sale meet state and federal pesticide law registration requirements.

The Legislature also established the authority under Section 80-8-304, MCA, to take residue samples related to either routine inspections or complaint investigations. Residue samples taken per year vary according to the number of inspections/investigations conducted during the use season. The number of samples collected per investigation depends on the number of pesticides involved in the investigation and the complexity of the investigation. Analytical results are incorporated as case evidence for enforcement.

Per 80-1-104, MCA and 80-8-302, MCA the Analytical Laboratory is authorized to carry out testing services in support of the pesticide program and the groundwater protection program. The support it provides for these programs facilitates confident regulatory action through accredited analytical methods. Table 3 shows the total number of enforcement (physical) samples collected and the number of analysis (data points) produced in FY 2020-2021:

Table 3

<b>Samples Collected &amp; Analyzed (data points) per Year</b>		
<b>Year</b>	<b>Samples Collected</b>	<b>Analysis Conducted</b>
<b>2020</b>	35	653
<b>2021</b>	86	1376

**Compliance Inspections – Non-compliance**

MDA conducts comprehensive inspections and investigations. for such topics as use, selling, labeling, registration, storage, records, and licensure compliance. A single inspection can result in multiple category violations.

Table 4 illustrates the number of inspections conducted yearly and shows the percent of non-compliance.

Table 4

<b>History of Compliance</b>		
<b>Year</b>	<b>Total Number of Inspections</b>	<b>Percent Non-Compliance</b>
<b>2020</b>	629	<5%
<b>2021</b>	312	<5%

### **Major Violations:**

In FY 2020 and 2021, the number of follow-up (for cause) investigations (30-50) was slightly higher than that of the previous 2-year reporting period. Most pesticide use violations are discovered through complaint investigations resulting from tips and complaints from the public. Case significance or severity depends on several factors including the type of violation and potential or actual occurrence of harm from pesticides. Each case has its own unique set of circumstances and is investigated according to department guidance documents and policies.

Very few cases go unresolved beyond fiscal year end. Cases that are in what could be called “open status” at the end of the fiscal year, are cases or complaints that were received by the department late near the end of the fiscal year, contested cases or multi-layered complex cases.

### **Significance of Noncompliance and Enforcement Options:**

Section 80-8-211, MCA, establishes violations that are cause for revoking or modifying a license. Section 80-8-303, MCA, authorizes the MDA to embargo pesticides that are adulterated, misbranded, or unregistered. Section 80-8-304, MCA, authorizes compliance orders requiring a person to correct violations and clean up pesticide spills. Upon completion of each investigation, a review process determines if there is enough evidence to support enforcement action. Section 80-8-306, MCA, authorizes the department to issue written warnings or propose administrative civil penalties to settle a case. The department may also seek judicial civil penalties or criminal penalties under that same section. Minor violations that involve record keeping, storage or equipment maintenance are handled through the compliance assistance process or by the issuance of a Notice of Non- Compliance (NONC). Violations handled under these processes have not resulted in harm to humans or the environment.

The Montana Pesticide Act defines a major violation as one that is subject to civil penalties in Section 80-8-306 (5) (e), MCA. The Act specifically states that the department, in determining an appropriate amount of civil penalty, shall consider the effect on the person’s ability to continue to stay in business, the degree of harm, gravity factors associated with the violation, and the degree of care taken by the offender. The MDA considers these factors when determining the amount of the civil penalty for each violation. All enforcement actions are subject to appeal (or may be contested) according to provisions of the Montana Administrative Procedure Act.

### **1d. Compliance and Enforcement History - Trends:**

Over the past several years, the number of major violations requiring MDA enforcement action has decreased. There are several factors that explain the decrease. One significant factor that helped reduce the number of misuse violations is the quality and quantity of applicator training provided by MDA and MSU PEP to the agriculture industry. Another factor is the evolution of new and improved application equipment, products, and additives that help control pesticide drift. Montana applicators have also taken a more proactive approach to pesticide use education and that effort has helped reduce the number of cases the MDA is asked to

address. Unique weather, pest infestation and agriculture economy also drive pesticide use and therefore can affect the number of cases each year.

## **GROUNDWATER PROTECTION PROGRAM:**

The Montana Agricultural Chemical Groundwater Protection Act (MACGWPA), Title 80, Chapter 15, Montana Code Annotated (MCA) was enacted in 1989. Establishing under 80-15-103, it is the public policy of this state to:

- (1) protect ground water and the environment from impairment or degradation due to the use of agricultural chemicals.
- (2) allow for the proper and correct use of agricultural chemicals.
- (3) provide for the management of agricultural chemicals to prevent, minimize, and mitigate their presence in ground water; and
- (4) provide for education and training of agricultural chemical applicators and the public on ground water protection, agricultural chemical use, and the use of alternative agricultural methods.

### ***1a. Ongoing Activities and Efforts to Promote Compliance Assistance and Education***

The Groundwater Protection program promotes compliance in accordance with the statutory goals of the program through:

#### **Information/Education:**

The department promotes research and provides information and technical assistance to prevent groundwater impairment by agricultural chemicals. MDA is also involved in an ongoing process of identifying environmentally sensitive areas, soils, and aquifers. Through education and outreach, the department provides information on groundwater and agricultural chemical characterization and Best Management Practices (BMP). Information about agricultural chemicals in Montana groundwater is delivered through analytical results from MDA's statewide monitoring program. Public meetings (such as weed district meetings) and pesticide certification training events serve as venues to inform the public about vulnerable areas within Montana. Special project reports detailing MDA monitoring of major agricultural regions for pesticides and nitrate are also available on the department's web site at [agr.mt.gov/groundwater](http://agr.mt.gov/groundwater).

As required under Section 80-15-106, MCA, the department develops and conducts appropriate educational programs. Groundwater protection is a component of all pesticide applicator trainings during which MDA provides education and demonstrations for commercial, non-commercial, and governmental applicators and the public on groundwater protection, agricultural chemical use, and the use of alternative crop protection methods.

In cooperation with MSU Extension Service, MDA provides initial and recertification training and testing for all licensed pesticide applicators, a primary focus of which is to protect Montana's water resources from agriculture chemical impairment. MDA maintains a comprehensive strategy, the Montana General Agricultural Chemical Ground Water Management Plan, as well as a variety of training manuals to provide education on agricultural chemical handling, use, application, and disposal. For example, the "*Pesticide and Fertilizer Use Around the Home, Effects on Water Resources and Alternatives to Chemical Controls,*" was established in cooperation with the MSU Extension Water Quality Program to provide

guidance to homeowners and examples of appropriate stewardship practices to protect Montana water resources from the impacts of chemical use.

### **Technical Assistance:**

The department utilizes MDA, EPA, and MSU Extension Service bulletins, brochures, reports, and other training aids to prevent agricultural chemicals from impairing groundwater. Preventative efforts also include educational programs, direct contact with regulated communities, and sharing of analytical data with other agencies serving to protect Montana's water quality.

The Montana Agricultural Chemical Ground Water Protection Act (MACGWPA) provides for the Groundwater Protection Program under 80-15-107, a research monitoring and technical assistance program. General statewide ambient groundwater monitoring for impairment by agricultural chemicals has been ongoing since 1984. The General Management Plan identifies environmentally sensitive areas, soils, and aquifers, as well as Best Management Practices for the use of agricultural chemicals in Montana.

In accordance with Section 80-15-202, MCA, MDA conducts monitoring activities to determine if agricultural chemical residues are present in groundwater resources and evaluate the risk of agricultural chemicals entering groundwater. Since initiating its groundwater monitoring program in 1984 and establishing a permanent monitoring well network in 1991, the department has expanded its program to include 32 wells located in areas across the state that are representative of agricultural production or with extensive noxious weed management. In 2018, MDA collected samples for chemical analysis from 30 wells and 8 surface water locations. In 2019, MDA collected samples for chemical analysis from 32 well locations. The department also conducts project specific monitoring to augment permanent well monitoring efforts, generally as a response to new scientific research or to meet a state identified need.

MDA determines the appropriate response depending on the levels of agricultural chemicals present in monitoring results. At a minimum, landowners receive a summary of monitoring results along with a brief description of any agricultural chemicals detected. Additional appropriate response activities may include land-use recommendations, mandatory spill clean-up, additional monitoring, or referral to the Department of Environmental Quality for remediation. The development of a Specific Management Plan (SMP) pursuant to Section 80-15-212, MCA may also be an appropriate response. Continued monitoring, data sharing, and education are also incorporated into responses to promote awareness, prevention, and resource protection.

### **Specific Management Plans (SMP):**

Section 80-15-212, MCA, requires MDA to adopt "Specific Agricultural Chemical Groundwater Management Plans" (SMP) when necessary to protect groundwater. The 2005 Legislature passed HB 107, which clarified conditions requiring a SMP and allowed the department to address the presence of low-level agriculture chemicals in groundwater through educational measures when an agricultural chemical is found at or above 50 percent of the human health standards established by the Department of Environmental Quality in Circular DEQ-7 Montana Numeric Water Quality Standards. SMPs are designed to prevent, minimize, and mitigate the presence of pesticides in groundwater in an appropriate and cost-effective manner following provisions set forth under HB 107.

**1b. Size and Description of the Regulated Community**

In general, the regulated community includes all persons who apply pesticides to control weed, insect, animal, and microorganism pests. Anyone who applies pesticides must read and follow the container label directions for use, including the label directions to protect both ground and surface water.

Much of the regulated community is licensed through the department; however, some of the regulated community that uses pesticides and/or fertilizers are not required to have a license or attend mandatory trainings, such as landowners and homeowners. Pesticide dealers, fertilizer dealers, and some pesticide applicators are required to be licensed by the MDA and would therefore be identifiable for training and potential regulation purposes. The same is true for landowners who seek out training, Best Management Practices (BMPs) and Best Available Technology (BATs).

**1c. Non-Compliance and Method of Discovery:**

MDA can issue orders to clean up pesticide spills, sample soils and groundwater, and remove select soils in accordance with the Montana Pesticide Act, Title 80. The department has issued informative letters to fertilizer facilities where soils may be contaminated with high levels of nitrate that have the potential of impacting groundwater to improve operational activities and minimize further contamination through Best Management Practices for handling and storing fertilizers.

Monitoring results are evaluated to determine if a pesticide is present in groundwater resources and whether or not detections are a concern for human health. The Department of Environmental Quality (DEQ) is responsible for development of human health standards. The relative significance of an agricultural chemical residue in groundwater is related to the percentage of the Montana Water Quality Standard met. MDA groundwater monitoring services assist with locating contaminated groundwater bodies, possible source(s) for the contamination, and severity of impairment. MDA evaluates and implements appropriate enforcement and/or mitigation responses based on the level and source (i.e., point or non-point source) of contamination.

Per MCA 80-1-104 and MCA 80-8-302 the Analytical Laboratory is authorized to carry out testing services in support of the pesticide program and the groundwater protection program. The support it provides for these programs facilitates confident regulatory action through accredited analytical methods. Table 1 shows the total number of monitoring samples collected and the number of analyses conducted during 2020-2021:

Table 1

<b>Samples Collected &amp; Analyzed per Year</b>		
<b>Year</b>	<b>Samples Collected</b>	<b>Analytes Measured</b>
<b>2020</b>	129	9,577
<b>2021</b>	129	9,706

**1d. Compliance and Enforcement History - Trends:**

At the time of this report, there are no significant non-compliance issues related to non-point source groundwater contamination from agricultural chemicals. The Groundwater Protection

Program maintains a permanent monitoring well network distributed across the state to capture various land uses and geographical conditions.

Detected pesticide concentrations are very low and do not exceed or approach human health drinking water standards set by DEQ. In 2020 and 2021, no pesticide detections from the permanent monitoring well network exceeded 50% of the respective human health drinking water standard. Most detections were less than 5% of the respective human health drinking water standard.

Nitrate data from the permanent monitoring wells, which are single use (monitoring wells) and not used for drinking or stock water, indicate that the average detected nitrate concentration was 143.1% of the drinking water standard in 2020; the average detected nitrite concentration was 0.8% of the drinking water standard in 2020. In 2021, the average detected nitrate concentration was 166.2% of the drinking water standard; the average detected nitrite concentration was 1.4% of the drinking water standard. The source of the nitrate has not been identified. MDA continues to coordinate nitrate and nitrite results and follow-up activities with DEQ.